



SEQUENCE LISTING

#3  
RECEIVED

AUG 08 2001

TECH CENTER 1600/2900

<110> Ruvkun, Gary  
Kimura, Koutarou  
Patterson, Garth  
Ogg, Scott  
Paradis, Suzanne  
Tissenbaum, Heidi  
Morris, Jason  
Koweeek, Allison

<120> THERAPEUTIC AND DIAGNOSTIC TOOLS FOR  
IMPAIRED GLUCOSE TOLERANCE CONDITIONS

<130> 00786/351005

<140> US 09/844,353

<141> 2001-04-27

<150> US 08/857,076

<151> 1997-05-15

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<212> PRT

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Ser Leu Thr Ile Ser Phe Val Leu Lys His Lys Thr Lys Ala Gln Glu
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Glu Met His Arg Ser Leu Gln Pro Arg Tyr Ser Gln Asp Glu Phe Ile
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Thr Phe Pro His Leu Arg Glu Ile Thr Gly Thr Leu Leu Val Phe Glu
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Thr Glu Gly Leu Val Asp Leu Arg Lys Ile Phe Pro Asn Leu Arg Val
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Ile Gly Gly Arg Ser Leu Ile Gln His Tyr Ala Leu Ile Ile Tyr Arg
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Gly Gly Val Arg Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys Thr
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Ile Asp Trp Lys His Leu Ile Thr Ser Ser Ile Asn Asp Val Val Val
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Asp Asn Ala Ala Glu Tyr Ala Val Thr Glu Thr Gly Leu Met Cys Pro
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Arg Gly Ala Cys Glu Glu Asp Lys Gly Glu Ser Lys Cys His Tyr Leu
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[illegible]

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 <213> Caenorhabditis elegans

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 <213> Caenorhabditis elegans

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Met	Leu	Thr	Glu	Asp	Gly	Lys	Tyr	Val	His	Ile	Asp	Phe	Gly	His	Ile	
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Leu	Gly	His	Gly	Lys	Thr	Lys	Leu	Gly	Ile	Gln	Arg	Asp	Arg	Gln	Pro	
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Phe	Ile	Leu	Thr	Glu	His	Phe	Met	Thr	Val	Ile	Arg	Ser	Gly	Lys	Ser	
65					70				75					80		
Val	Asp	Gly	Asn	Ser	His	Glu	Leu	Gln	Lys	Phe	Lys	Thr	Leu	Cys	Val	
			85						90				95			
Glu	Ala	Tyr	Glu	Val	Met	Trp	Asn	Asn	Arg	Asp	Leu	Phe	Val	Ser	Leu	
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Phe	Thr	Leu	Met	Leu	Gly	Met	Glu	Leu	Pro	Glu	Leu	Ser	Thr	Lys	Ala	
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Asp	Leu	Asp	His	Leu	Lys	Lys	Thr	Leu	Phe	Cys	Asn	Gly	Glu	Ser	Lys	
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 <213> Caenorhabditis elegans

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 <213> Caenorhabditis elegans

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<210> 22  
 <211> 20  
 <212> PRT  
 <213> Caenorhabditis elegans

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 Phe Lys Ala Gln  
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 <213> Caenorhabditis elegans

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 Gly Val Arg Phe Tyr Leu Leu Ala Gly Glu Val Tyr Val Glu Asn Leu  
 35 40 45  
 Cys Asn Ile Pro Val Phe Val Gln Ser Ile Gly Ala Asn Met Lys Asn  
 50 55 60  
 Gly Phe Gln Leu Asn Thr Val Ser Lys Leu Pro Pro Thr Gly Thr Met  
 65 70 75 80  
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 85 90 95  
 Glu Lys Thr Tyr Gln Asp Val Tyr Cys Leu Ser Arg Met Cys Thr Val  
 100 105 110  
 Arg Val Ser Phe Cys Lys Gly Trp Gly Glu His Tyr Arg Arg Ser Thr  
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 Val Leu Arg Ser Pro Val Trp Phe Gln Ala His Leu Asn Asn Pro Met

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<210> 24  
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 <213> Caenorhabditis elegans

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 Leu Asn Pro Tyr His Tyr Arg Trp Val Glu Leu Pro  
 35                      40

<210> 25  
 <211> 38  
 <212> PRT  
 <213> Caenorhabditis elegans

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 Leu Ile Asp Gly Phe Thr  
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 <211> 60  
 <212> PRT  
 <213> Caenorhabditis elegans

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 20                      25                      30  
 Tyr Ile Lys Leu Ile Tyr Val Asn Arg Asp Gly Arg Val Ser Ile Ala  
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 Asn Val Asn Gly Met Ile Ala Lys Lys Cys Gly Cys  
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 <213> Caenorhabditis elegans

<400> 27  
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<221> misc\_feature  
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23

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18

<210> 33  
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 <213> Caenorhabditis elegans

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 Ile Asn Arg Asp Glu Thr Val Lys Ile Gly Asp Phe Gly Met Ala Arg  
 35 40 45  
 Asp Leu Phe Tyr His Asp Tyr Tyr Lys Pro Ser Gly Lys Arg Met Met  
 50 55 60  
 Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp Gly Lys Phe Asp  
 65 70 75 80  
 Ser Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Met Val  
 85 90 95  
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 115 120 125

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 <213> Caenorhabditis elegans

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 35 40 45

Ala Cys Lys Asn Val Tyr His Lys Gly Lys Cys Ile Glu Lys Cys Asp  
50 55 60  
Ala His Leu Tyr Leu Leu Leu Gln Arg Arg Cys Val Thr Arg Glu Gln  
65 70 75 80  
Cys Leu Gln Leu Asn Pro Val Leu Ser Asn Lys Thr Val Pro Ile Lys  
85 90 95  
Ala Thr Ala Gly Leu Cys Ser Asp Lys Cys Pro Asp Gly Tyr Gln Ile  
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<211> 103  
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<213> Caenorhabditis elegans

<400> 35  
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Lys Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu  
35 40 45  
Gln Val His Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu  
50 55 60  
Trp Arg Phe Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His  
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<213> Caenorhabditis elegans

<400> 36  
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Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val  
35 40 45  
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50 55 60  
Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe  
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<210> 37  
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[illegible]

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<210> 38
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<212> PRT
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<212> DNA
<213> Caenorhabditis elegans
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-17-

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caccaaggtc aggtaccgaa tgatccacca atttcaagac cagtgttaca accatcaaca 1380
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 <212> PRT  
 <213> Caenorhabditis elegans

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Ile Lys Met Glu Ile Pro Pro Tyr Leu Asp Pro Asp Ser Gln Asp Asp
             35             40             45
Asp Pro Glu Asp Gly Val Asn Tyr Pro Asp Pro Asp Leu Phe Asp Thr
             50             55             60
Lys Asn Thr Asn Met Thr Glu Tyr Asp Leu Asp Val Leu Lys Leu Gly
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Lys Pro Ala Val Asp Glu Ala Arg Lys Lys Ile Glu Val Pro Asp Ala
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Ser Ala Pro Pro Asn Lys Ile Val Glu Tyr Leu Met Tyr Tyr Arg Thr
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Leu Lys Glu Ser Glu Leu Ile Gln Leu Asn Ala Tyr Arg Thr Lys Arg
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Asn Arg Leu Ser Leu Asn Leu Val Lys Asn Asn Ile Asp Arg Glu Phe
             130            135            140
Asp Gln Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys Lys
             145            150            155            160
Asn Asp Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr Lys
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Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu Gln

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	210					215					220									
Lys	His	Ala	Phe	Glu	Met	Lys	Ser	Asp	Met	Val	Cys	Val	Asn	Pro	Tyr					
225					230					235					240					
His	Tyr	Glu	Ile	Val	Ile	Gly	Thr	Met	Ile	Val	Gly	Gln	Arg	Asp	His					
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Asp	Asn	Arg	Asp	Met	Pro	Pro	Pro	His	Gln	Arg	Tyr	His	Thr	Pro	Gly					
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Arg	Gln	Asp	Pro	Val	Asp	Asp	Met	Ser	Arg	Phe	Ile	Pro	Pro	Ala	Ser					
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Ile	Arg	Pro	Pro	Pro	Met	Asn	Met	His	Thr	Arg	Pro	Gln	Pro	Met	Pro					
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Gln	Gln	Leu	Pro	Ser	Val	Gly	Ala	Thr	Phe	Ala	His	Pro	Leu	Pro	His					
305					310					315					320					
Gln	Ala	Pro	His	Asn	Pro	Gly	Val	Ser	His	Pro	Tyr	Ser	Ile	Ala	Pro					
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Gln	Thr	His	Tyr	Pro	Leu	Asn	Met	Asn	Pro	Ile	Pro	Gln	Met	Pro	Gln					
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Pro	Ser	Cys	Ser	Ser	Glu	Asn	Asn	Asn	Pro	Phe	His	Gln	Asn	His	His					
	370					375					380									
Tyr	Asn	Asp	Ile	Ser	His	Pro	Asn	His	Tyr	Ser	Tyr	Asp	Cys	Gly	Pro					
385					390					395				400						
Asn	Leu	Tyr	Gly	Phe	Pro	Thr	Pro	Tyr	Pro	Asp	Phe	His	His	Pro	Phe					
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Asn	Gln	Gln	Pro	His	Gln	Pro	Pro	Gln	Leu	Ser	Gln	Asn	His	Thr	Ser					
			420					425					430							
Gln	Gln	Gly	Ser	His	Gln	Pro	Gly	His	Gln	Gly	Gln	Val	Pro	Asn	Asp					
		435					440					445								
Pro	Pro	Ile	Ser	Arg	Pro	Val	Leu	Gln	Pro	Ser	Thr	Val	Thr	Leu	Asp					
	450					455					460									
Val	Phe	Arg	Arg	Tyr	Cys	Arg	Gln	Thr	Phe	Gly	Asn	Arg	Phe	Phe	Glu					
465					470					475					480					
Gly	Glu	Ser	Glu	Gln	Ser	Gly	Ala	Ile	Ile	Arg	Ser	Ser	Asn	Lys	Phe					
				485					490					495						
Ile	Glu	Glu	Phe	Asp	Ser	Pro	Ile	Cys	Gly	Val	Thr	Val	Val	Arg	Pro					
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Pro	Tyr	His	Asp																	

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Lys	Asp	Lys	Val	His	Lys	Val	Tyr	Gly	Cys	Ala	Ser	Ile	Lys	Thr	Phe		
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Gly	Phe	Asn	Val	Ser	Lys	Gln	Ile	Ile	Arg	Asp	Ala	Leu	Leu	Ser	Lys		
		675					680						685				
Gln	Met	Ala	Thr	Met	Tyr	Leu	Gln	Gly	Lys	Leu	Thr	Pro	Met	Asn	Tyr		
	690					695					700						
Ile	Tyr	Glu	Lys	Lys	Thr	Gln	Glu	Glu	Leu	Arg	Arg	Glu	Ala	Thr	Arg		
705					710					715					720		
Thr	Thr	Asp	Ser	Leu	Ala	Lys	Tyr	Cys	Cys	Val	Arg	Val	Ser	Phe	Cys		
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Lys	Gly	Phe	Gly	Glu	Ala	Tyr	Pro	Glu	Arg	Pro	Ser	Ile	His	Asp	Cys		
			740					745					750				
Pro	Val	Trp	Ile	Glu	Leu	Lys	Ile	Asn	Ile	Ala	Tyr	Asp	Phe	Met	Asp		
	755						760					765					
Ser	Ile	Cys	Gln	Tyr	Ile	Thr	Asn	Cys	Phe	Glu	Pro	Leu	Gly	Met	Glu		
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 <213> Caenorhabditis elegans

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Tyr	Gly	Gly	Lys	Pro	Ser	His	Gly	Leu	Glu	Asp	Ile	Pro	Asp	Val	Glu		
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Ser	Pro	Val	Asn	Thr	Thr	Lys	Ile	Leu	Gln	Arg	Ser	Gly	Ile	Lys			
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Ala	Val	Asp	Glu	Ala	Arg	Lys	Lys	Ile	Glu	Val	Pro	Asp	Ala	Ser	Ala		
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Leu	Ser	Leu	Asn	Leu	Val	Lys	Asn	Asn	Ile	Asp	Arg	Glu	Phe	Asp	Gln		
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Lys	Ala	Cys	Glu	Ser	Leu	Val	Lys	Lys	Leu	Lys	Asp	Lys	Lys	Asn	Asp		
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Ala	Phe	Glu	Met	Lys	Ser	Asp	Met	Val	Cys	Val	Asn	Pro	Tyr	His	Tyr
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Asp	Pro	Val	Asp	Asp	Met	Ser	Arg	Phe	Ile	Pro	Pro	Ala	Ser	Ile	Arg
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Pro	Pro	Pro	Met	Asn	Met	His	Thr	Arg	Pro	Gln	Pro	Met	Pro	Gln	Gln
		355					360					365			
Leu	Pro	Ser	Val	Gly	Ala	Thr	Phe	Ala	His	Pro	Leu	Pro	His	Gln	Ala
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385					390					395					400
His	Tyr	Pro	Leu	Asn	Met	Asn	Pro	Ile	Pro	Gln	Met	Pro	Gln	Met	Pro
				405					410					415	
Gln	Met	Pro	Pro	Pro	Leu	His	Gln	Gly	Tyr	Gly	Met	Asn	Gly	Pro	Ser
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Cys	Ser	Ser	Glu	Asn	Asn	Asn	Pro	Phe	His	Gln	Asn	His	His	Tyr	Asn
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Asp	Ile	Ser	His	Pro	Asn	His	Tyr	Ser	Tyr	Asp	Cys	Gly	Pro	Asn	Leu
	450					455				460					
Tyr	Gly	Phe	Pro	Thr	Pro	Tyr	Pro	Asp	Phe	His	His	Pro	Phe	Asn	Gln
465					470					475					480
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Thr	Asp	Gly	Glu	Val	Leu	Glu	Asn	Ile	Met	Pro	Glu	Asp	Ala	Pro	Tyr
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His	Asp	Ile	Cys	Lys	Phe	Ile	Leu	Arg	Leu	Thr	Ser	Glu	Ser	Val	Thr
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705					710					715					720
Lys	Val	His	Lys	Val	Tyr	Gly	Cys	Ala	Ser	Ile	Lys	Thr	Phe	Gly	Phe
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Asp	Ile	Val	Asp	Arg	Thr	Asp	Gln	Met	Arg	Ile	Asp	Ala	Thr	Thr	His
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	385				390					395					400
Ser	Cys	Ala	Gln	Asn	Pro	Leu	Leu	Arg	Asn	Pro	Ile	Val	Pro	Ser	Thr
			405						410					415	
Asn	Phe	Lys	Pro	Met	Pro	Leu	Pro	Gly	Ala	Tyr	Gly	Asn	Tyr	Gln	Asn
			420					425					430		
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Leu	Pro	Gly	Ile	Gln	Ser	Cys	Gly	Ile	Val	Ala	Ala	Gln	His	Thr	Val
	450					455				460					
Ala	Ser	Ser	Ser	Ala	Leu	Pro	Ile	Asp	Leu	Glu	Asn	Leu	Thr	Leu	Pro
	465				470					475					480
Asp	Gln	Pro	Leu	Met	Asp	Thr	Met	Asp	Val	Asp	Ala	Leu	Ile	Arg	His
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<210> 46  
 <211> 509  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 46

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		20						25					30		
Gln	Leu	Pro	His	Met	Gln	Gln	Leu	Pro	Gln	Pro	Leu	Leu	Asn	Leu	Asn
		35					40					45			
Met	Thr	Thr	Leu	Thr	Ser	Ser	Gly	Ser	Ser	Val	Ala	Ser	Ser	Ile	Gly
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Thr	Asn	Ser	Ser	Gln	Gln	Gln	Gln	Thr	Val	Gly	Gln	Met	Leu	Ala	Ala
				85					90					95	
Ser	Val	Pro	Cys	Ser	Ser	Ser	Gly	Met	Thr	Leu	Gly	Met	Ser	Leu	Asn
			100					105					110		
Leu	Ser	Gln	Gly	Gly	Gly	Pro	Met	Pro	Ala	Lys	Lys	Lys	Arg	Cys	Arg
			115				120					125			
Lys	Lys	Pro	Thr	Asp	Gln	Leu	Ala	Gln	Lys	Lys	Pro	Asn	Pro	Trp	Gly
						135					140				
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Ile	Pro	Tyr	Phe	Gly	Glu	Arg	Ser	Ser	Pro	Glu	Glu	Ala	Ala	Gly	Trp
				180					185					190	
Lys	Asn	Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Arg	Phe	Met	Arg
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225					230					235					240
Thr	Ile	Glu	Thr	Thr	Thr	Lys	Ala	Gln	Leu	Glu	Lys	Ser	Arg	Arg	Gly
				245					250					255	
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Thr	Leu	Asn	Gly	Asn	Ser	Ile	Ala	Gly	Ser	Ile	Gln	Thr	Ile	Ser	His
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Ser	Ser	Arg	Val	Ser	Pro	Ala	Ile	Gly	Ser	Asp	Ile	Tyr	Asp	Asp	Leu
				325					330					335	
Glu	Phe	Pro	Ser	Trp	Val	Gly	Glu	Ser	Val	Pro	Ala	Ile	Pro	Ser	Asp
				340				345					350		
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				355			360					365			
Gly	Gly	Val	Gln	Ile	Lys	Gln	Glu	Ser	Lys	Pro	Ile	Lys	Thr	Glu	Pro
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Cys	Ala	Gln	Asn	Pro	Leu	Leu	Arg	Asn	Pro	Ile	Val	Pro	Ser	Thr	Asn
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Phe	Lys	Pro	Met	Pro	Leu	Pro	Gly	Ala	Tyr	Gly	Asn	Tyr	Gln	Asn	Gly
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<210> 47  
<211> 3504

<212> DNA  
 <213> *Caenorhabditis elegans*

<400> 47

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<210> 48
<211> 1167
<212> PRT
<213> Caenorhabditis elegans

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35     40     45
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50     55     60
Ile Ile Thr Met Cys Pro Phe Gly Glu Val Ile Ser Val Val Phe Pro
65     70     75     80
Trp Phe Leu Ala Asn Val Arg Thr Ser Leu Glu Ile Lys Leu Ser Asp
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Phe Lys His Gln Leu Phe Glu Leu Ile Ala Pro Met Lys Trp Gly Thr
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Tyr Ser Val Lys Pro Gln Asp Tyr Val Phe Arg Gln Leu Asn Asn Phe
115    120    125
Gly Glu Ile Glu Val Ile Phe Asn Asp Asp Gln Pro Leu Ser Lys Leu
130    135    140
Glu Leu His Gly Thr Phe Pro Met Leu Phe Leu Tyr Gln Pro Asp Gly
145    150    155    160
Ile Asn Arg Asp Lys Glu Leu Met Ser Asp Ile Ser His Cys Leu Gly
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Tyr Ser Leu Asp Lys Leu Glu Glu Ser Leu Asp Glu Glu Leu Arg Gln
180    185    190
Phe Arg Ala Ser Leu Trp Ala Arg Thr Lys Lys Thr Cys Leu Thr Arg
195    200    205
Gly Leu Glu Gly Thr Ser His Tyr Ala Phe Pro Glu Glu Gln Tyr Leu
210    215    220
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225    230    235    240
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245    250    255
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260    265    270
Asn Glu Thr Pro Lys Ser Leu Leu His Thr Phe Leu Tyr Glu Met Arg
275    280    285
Lys Leu Asp Val Tyr Asp Thr Asp Asp Pro Ala Asp Glu Gly Trp Phe
290    295    300
Leu Gln Leu Ala Gly Arg Thr Thr Phe Val Thr Asn Pro Asp Val Lys
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Leu Thr Ser Tyr Asp Gly Val Arg Ser Glu Leu Glu Ser Tyr Arg Cys
325    330    335
Pro Gly Phe Val Val Arg Arg Gln Ser Leu Val Leu Lys Asp Tyr Cys
340    345    350
Arg Pro Lys Pro Leu Tyr Glu Pro His Tyr Val Arg Ala His Glu Arg
355    360    365

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385					390					395					400
Ser	Leu	Lys	Gln	Val	Ser	Leu	Trp	Asp	Leu	Asp	Ala	Asn	Leu	Met	Ile
			405					410						415	
Arg	Pro	Val	Asn	Ile	Ser	Gly	Phe	Asp	Phe	Pro	Ala	Asp	Val	Asp	Met
		420						425					430		
Tyr	Val	Arg	Ile	Glu	Phe	Ser	Val	Tyr	Val	Gly	Thr	Leu	Thr	Leu	Ala
	435						440					445			
Ser	Lys	Ser	Thr	Thr	Lys	Val	Asn	Ala	Gln	Phe	Ala	Lys	Trp	Asn	Lys
450						455					460				
Glu	Met	Tyr	Thr	Phe	Asp	Leu	Tyr	Met	Lys	Asp	Met	Pro	Pro	Ser	Ala
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Val	Leu	Ser	Ile	Arg	Val	Leu	Tyr	Gly	Lys	Val	Lys	Leu	Lys	Ser	Glu
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Glu	Phe	Glu	Val	Gly	Trp	Val	Asn	Met	Ser	Leu	Thr	Asp	Trp	Arg	Asp
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Glu	Leu	Arg	Gln	Gly	Gln	Phe	Leu	Phe	His	Leu	Trp	Ala	Pro	Glu	Pro
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Thr	Ala	Asn	Arg	Ser	Arg	Ile	Gly	Glu	Asn	Gly	Ala	Arg	Ile	Gly	Thr
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Met	Pro	Ser	Gln	Gly	Gln	Tyr	Thr	Tyr	Leu	Val	Lys	His	Arg	Ser	Thr
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Trp	Thr	Glu	Thr	Leu	Asn	Ile	Met	Gly	Asp	Asp	Tyr	Glu	Ser	Cys	Ile
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Val	Gly	Met	Met	Leu	Leu	Thr	Arg	Ala	Leu	Cys	Asp	Tyr	Arg	Ile	Gly
			725						730					735	
His	Arg	Leu	Phe	Trp	Leu	Leu	Arg	Ala	Glu	Ile	Ala	Arg	Leu	Arg	Asp
		740						745					750		
Cys	Asp	Leu	Lys	Ser	Glu	Glu	Tyr	Arg	Arg	Ile	Ser	Leu	Leu	Met	Glu
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Ala	Tyr	Leu	Arg	Gly	Asn	Glu	Glu	His	Ile	Lys	Ile	Ile	Thr	Arg	Gln
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Val	Asp	Met	Val	Asp	Glu	Leu	Thr	Arg	Ile	Ser	Thr	Leu	Val	Lys	Gly
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Met	Pro	Lys	Asp	Val	Ala	Thr	Met	Lys	Leu	Arg	Asp	Glu	Leu	Arg	Ser
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<213> Artificial Sequence

<220>

<223> Probe/primer derived from *C. elegans*

<400> 50

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<210> 51

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Probe/primer derived from *C. elegans*

<400> 51

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28

<210> 52

<211> 3017

<212> DNA

<213> *Caenorhabditis elegans*

<400> 52

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caatctgcca gtacataacc aactgcttcg agccgctagg aatggaagat tttgcaaaat 2700  
tggaatcaa cgtcagtgat gactaaatga taactttttt cactcaccct actagatact 2760  
gatttagtct tattccaaat catccaacga tatcaaactt tttcctttga actttgcata 2820  
ctatgttatc acaagttcca agcagtttca atacaaacat aggatatgtt aacaactttt 2880  
gataagaatc aagttacca ctgttcattg tgagctttga gctgtataga aggacaatgt 2940  
atcccatacc tcaatcttta atagtcata gtcactggtc ccgcaccaat ttttcgatt 3000  
cgcatatgtc atatatgtca ccgtggccct ttttattgta acttttaata tattttcttc 3060  
ccaacttggtg aatatgattg atgaaccacc attttgagta ataaatgtat tttttgtgg 3119

<210> 54  
<211> 103  
<212> PRT  
<213> Caenorhabditis elegans

<400> 54  
Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp Gly Asn Met Ser Tyr Ala  
1 5 10 15  
Glu Leu Ile Thr Thr Ala Ile Met Ala Ser Pro Glu Lys Arg Leu Thr  
20 25 30  
Leu Ala Gln Val Tyr Glu Trp Met Val Gln Asn Val Pro Tyr Phe Arg  
35 40 45  
Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly Trp Lys Asn Ser Ile Arg  
50 55 60  
His Asn Leu Ser Leu His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly  
65 70 75 80  
Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly  
85 90 95  
Met Asn Pro Arg Arg Thr Arg  
100

<210> 55  
<211> 41  
<212> PRT  
<213> Caenorhabditis elegans

<400> 55  
Thr Phe Met Asn Thr Pro Asp Asp Val Met Met Asn Asp Asp Met Glu  
1 5 10 15  
Pro Ile Pro Arg Asp Arg Cys Asn Thr Trp Pro Met Arg Arg Pro Gln  
20 25 30  
Leu Glu Pro Pro Leu Asn Ser Ser Pro  
35 40

<210> 56  
<211> 109

<212> PRT  
 <213> Caenorhabditis elegans

<400> 56  
 Asp Asp Thr Val Ser Gly Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp  
 1 5 10 15  
 Gly Asn Met Ser Tyr Ala Glu Leu Ile Thr Thr Ala Ile Met Ala Ser  
 20 25 30  
 Pro Glu Lys Arg Leu Thr Leu Ala Gln Val Tyr Glu Trp Met Val Gln  
 35 40 45  
 Asn Val Pro Tyr Phe Arg Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly  
 50 55 60  
 Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met  
 65 70 75 80  
 Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser Trp Trp Val Ile Asn  
 85 90 95  
 Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg Thr Arg  
 100 105

<210> 57  
 <211> 655  
 <212> PRT  
 <213> Homo sapiens

<400> 57  
 Met Ala Glu Ala Pro Gln Val Val Glu Ile Asp Pro Asp Phe Glu Pro  
 1 5 10 15  
 Leu Pro Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro Arg Pro Glu Phe  
 20 25 30  
 Ser Gln Ser Asn Ser Ala Thr Ser Ser Pro Ala Pro Ser Gly Ser Ala  
 35 40 45  
 Ala Ala Asn Pro Asp Ala Ala Ala Gly Leu Pro Ser Ala Ser Ala Ala  
 50 55 60  
 Ala Val Ser Ala Asp Phe Met Ser Asn Leu Ser Leu Leu Glu Glu Ser  
 65 70 75 80  
 Glu Asp Phe Pro Gln Ala Pro Gly Ser Val Ala Ala Ala Val Ala Ala  
 85 90 95  
 Ala Ala Ala Ala Ala Ala Thr Gly Gly Leu Cys Gly Asp Phe Gln Gly  
 100 105 110  
 Pro Glu Ala Gly Cys Leu His Pro Ala Pro Pro Gln Pro Pro Pro Pro  
 115 120 125  
 Gly Pro Val Ser Gln His Pro Pro Val Pro Pro Ala Ala Ala Gly Pro  
 130 135 140  
 Leu Ala Gly Gln Pro Arg Lys Ser Ser Ser Ser Arg Arg Asn Ala Trp  
 145 150 155 160  
 Gly Asn Leu Ser Tyr Ala Asp Leu Ile Thr Lys Ala Ile Glu Ser Ser  
 165 170 175  
 Ala Glu Lys Arg Leu Thr Leu Ser Gln Ile Tyr Glu Trp Met Val Lys  
 180 185 190  
 Ser Val Pro Tyr Phe Lys Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly  
 195 200 205  
 Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Lys Phe Ile  
 210 215 220  
 Arg Val Gln Asn Glu Gly Thr Gly Lys Ser Ser Trp Trp Met Leu Asn  
 225 230 235 240  
 Pro Glu Gly Gly Lys Ser Gly Lys Ser Pro Arg Arg Arg Ala Ala Ser  
 245 250 255

Met	Asp	Asn	Asn	Ser	Lys	Phe	Ala	Lys	Ser	Arg	Ser	Arg	Ala	Ala	Lys
			260					265					270		
Lys	Lys	Ala	Ser	Leu	Gln	Ser	Gly	Gln	Glu	Gly	Ala	Gly	Asp	Ser	Pro
		275					280					285			
Gly	Ser	Gln	Phe	Ser	Lys	Trp	Pro	Ala	Ser	Pro	Gly	Ser	His	Ser	Asn
		290				295					300				
Asp	Asp	Phe	Asp	Asn	Trp	Ser	Thr	Phe	Arg	Pro	Arg	Thr	Ser	Ser	Asn
		305			310					315					320
Ala	Ser	Thr	Ile	Ser	Gly	Arg	Leu	Ser	Pro	Ile	Met	Thr	Glu	Gln	Asp
				325					330					335	
Asp	Leu	Gly	Glu	Gly	Asp	Val	His	Ser	Met	Val	Tyr	Pro	Pro	Ser	Ala
			340					345					350		
Ala	Lys	Met	Ala	Ser	Thr	Leu	Pro	Ser	Leu	Ser	Glu	Ile	Ser	Asn	Pro
		355					360					365			
Glu	Asn	Met	Glu	Asn	Leu	Leu	Asp	Asn	Leu	Asn	Leu	Leu	Ser	Ser	Pro
		370				375						380			
Thr	Ser	Leu	Thr	Val	Ser	Thr	Gln	Ser	Ser	Pro	Gly	Thr	Met	Met	Gln
		385			390					395					400
Gln	Thr	Pro	Cys	Tyr	Ser	Phe	Ala	Pro	Pro	Asn	Thr	Ser	Leu	Asn	Ser
				405					410						415
Pro	Ser	Pro	Asn	Tyr	Gln	Lys	Tyr	Thr	Tyr	Gly	Gln	Ser	Ser	Met	Ser
			420					425					430		
Pro	Leu	Pro	Gln	Met	Pro	Ile	Gln	Thr	Leu	Gln	Asp	Asn	Lys	Ser	Ser
		435					440					445			
Tyr	Gly	Gly	Met	Ser	Gln	Tyr	Asn	Cys	Ala	Pro	Gly	Leu	Leu	Lys	Glu
		450				455					460				
Leu	Leu	Thr	Ser	Asp	Ser	Pro	Pro	His	Asn	Asp	Ile	Met	Thr	Pro	Val
		465			470					475					480
Asp	Pro	Gly	Val	Ala	Gln	Pro	Asn	Ser	Arg	Val	Leu	Gly	Gln	Asn	Val
				485					490					495	
Met	Met	Gly	Pro	Asn	Ser	Val	Met	Ser	Thr	Tyr	Gly	Ser	Gln	Ala	Ser
			500					505					510		
His	Asn	Lys	Met	Met	Asn	Pro	Ser	Ser	His	Thr	His	Pro	Gly	His	Ala
		515					520					525			
Gln	Gln	Thr	Ser	Ala	Val	Asn	Gly	Arg	Pro	Leu	Pro	His	Thr	Val	Ser
		530				535					540				
Thr	Met	Pro	His	Thr	Ser	Gly	Met	Asn	Arg	Leu	Thr	Gln	Val	Lys	Thr
					550					555					560
Pro	Val	Gln	Val	Pro	Leu	Pro	His	Pro	Met	Gln	Met	Ser	Ala	Leu	Gly
				565					570					575	
Gly	Tyr	Ser	Ser	Val	Ser	Ser	Cys	Asn	Gly	Tyr	Gly	Arg	Met	Gly	Leu
			580					585					590		
Leu	His	Gln	Glu	Lys	Leu	Pro	Ser	Asp	Leu	Asp	Gly	Met	Phe	Ile	Glu
		595					600				605				

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<210> 58
<211> 98
<212> PRT
<213> Caenorhabditis elegans
<400> 58
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Lys Pro Asn Pro Trp Gly Glu Glu Ser Tyr Ser Asp Ile Ile Ala Lys  
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 Ala Leu Glu Ser Ala Pro Asp Gly Arg Leu Lys Leu Asn Glu Ile Tyr  
 20 25 30  
 Gln Trp Phe Ser Asp Asn Ile Pro Tyr Phe Gly Glu Arg Ser Ser Pro  
 35 40 45  
 Glu Glu Ala Ala Gly Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu  
 50 55 60  
 His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser  
 65 70 75 80  
 Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg  
 85 90 95  
 Thr Arg

<210> 59  
 <211> 7  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 59  
 Trp Lys Asn Ser Ile Arg His  
 1 5

<210> 60  
 <211> 121  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 60  
 Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly  
 1 5 10 15  
 Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr  
 20 25 30  
 Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu  
 35 40 45  
 Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly  
 50 55 60  
 Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp  
 65 70 75 80  
 Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu  
 85 90 95  
 Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln  
 100 105 110  
 Ser Glu Thr Asp Thr Ser Tyr Phe Asp  
 115 120

<210> 61  
 <211> 66  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 61  
 Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe  
 1 5 10 15



<212> PRT  
 <213> Caenorhabditis elegans

<400> 65  
 Leu Gln Glu Leu Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe  
 1 5 10 15  
 Val Met Glu Phe Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg  
 20 25 30  
 Glu

<210> 66  
 <211> 21  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 66  
 Val Val Ile Glu Gly Trp Leu His Lys Lys Gly Glu His Ile Arg Asn  
 1 5 10 15  
 Trp Arg Pro Arg Phe  
 20

<210> 67  
 <211> 26  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 67  
 Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ser Glu Ile Val Leu Ala  
 1 5 10 15  
 Leu Gly Tyr Leu His Ala Asn Ser Ile Val  
 20 25

<210> 68  
 <211> 39  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 68  
 Ile Arg Val Ser Phe Cys Lys Gly Phe Gly Glu Thr Tyr Ser Arg Leu  
 1 5 10 15  
 Lys Val Val Asn Leu Pro Cys Trp Ile Glu Ile Ile Leu His Glu Pro  
 20 25 30  
 Ala Asp Glu Tyr Asp Thr Val  
 35

<210> 69  
 <211> 45  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 69  
 Ser Arg Asn Ser Lys Ser Ser Gln Ile Arg Asn Thr Val Gly Ala Gly  
 1 5 10 15







[illegible]

<210> 77

<212> PRT

<400> 77

<210> 78

<211> 15

<212> PRT

<400> 78

<210> 79

<211> 67

<212> PRT

<400> 79

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<210> 80  
 <211> 54  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 80  
 Val Ile Lys Lys Pro Glu Cys Cys Glu Asn Tyr Trp Tyr Lys Val Met  
 1 5 10 15  
 Lys Met Cys Trp Arg Tyr Ser Pro Arg Asp Arg Pro Thr Phe Leu Gln  
 20 25 30  
 Leu Val His Leu Leu Ala Ala Glu Ala Ser Pro Glu Phe Arg Asp Leu  
 35 40 45  
 Ser Phe Val Leu Thr Asp  
 50

<210> 81  
 <211> 69  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 81  
 Lys Gln Asp Ser Gly Met Ala Ser Glu Leu Lys Asp Ile Phe Ala Asn  
 1 5 10 15  
 Ile His Thr Ile Thr Gly Tyr Leu Leu Val Arg Gln Ser Ser Pro Phe  
 20 25 30  
 Ile Ser Leu Asn Met Phe Arg Asn Leu Arg Arg Ile Glu Ala Lys Ser  
 35 40 45  
 Leu Phe Arg Asn Leu Tyr Ala Ile Thr Val Phe Glu Asn Pro Asn Leu  
 50 55 60  
 Lys Lys Leu Phe Asp  
 65

<210> 82  
 <211> 52  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 82  
 Phe Pro His Leu Arg Glu Ile Thr Gly Thr Leu Leu Val Phe Glu Thr  
 1 5 10 15  
 Glu Gly Leu Val Asp Leu Arg Lys Ile Phe Pro Asn Leu Arg Val Ile  
 20 25 30  
 Gly Gly Arg Ser Leu Ile Gln His Tyr Ala Leu Ile Ile Tyr Arg Asn  
 35 40 45  
 Pro Asp Leu Glu  
 50

<210> 83  
 <211> 46  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 83  
 Glu Ile Gly Leu Asp Lys Leu Ser Val Ile Arg Asn Gly Gly Val Arg  
 1 5 10 15

Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys Thr Ile Asp Trp Lys  
 20 25 30  
 His Leu Ile Thr Ser Ser Ile Asn Asp Val Val Val Asp Asn  
 35 40 45

<210> 84  
 <211> 36  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 84  
 Tyr Asn Ala Asp Asp Trp Glu Leu Arg Gln Asp Asp Val Val Leu Gly  
 1 5 10 15  
 Gln Gln Cys Gly Glu Gly Ser Phe Gly Lys Val Tyr Leu Gly Thr Gly  
 20 25 30  
 Asn Asn Val Val  
 35

<210> 85  
 <211> 24  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 85  
 Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly  
 1 5 10 15  
 Phe Gly Glu Ala Tyr Pro Glu Arg  
 20

<210> 86  
 <211> 13  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 86  
 Gly Trp Asp Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala  
 1 5 10

<210> 87  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 87  
 Glu Val Leu Glu Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly  
 1 5 10 15  
 Leu Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr  
 20 25 30  
 Asn Gln Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Glu Ile  
 35 40 45  
 Arg Phe Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser Leu Leu Ser Gly  
 50 55 60  
 Leu Leu Lys Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Ser Glu Asp  
 65 70 75 80

Ala Lys Glu Ile Met Gln His Arg Phe Phe Ala Asn Ile Val Trp Gln  
 85 90 95  
 Asp Val Tyr Glu Lys Lys Leu Ser Pro Pro Phe Lys Pro Gln Val Thr  
 100 105 110  
 Ser Glu Thr Asp Thr Arg Tyr Phe Asp  
 115 120

<210> 88  
 <211> 121  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 88  
 Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly  
 1 5 10 15  
 Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr  
 20 25 30  
 Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu  
 35 40 45  
 Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly  
 50 55 60  
 Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp  
 65 70 75 80  
 Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu  
 85 90 95  
 Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln  
 100 105 110  
 Ser Glu Thr Asp Thr Ser Tyr Phe Asp  
 115 120

<210> 89  
 <211> 66  
 <212> PRT  
 <213> Homo sapiens

<400> 89  
 Thr Met Asn Glu Phe Glu Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe  
 1 5 10 15  
 Gly Lys Val Ile Leu Val Lys Glu Lys Ala Thr Gly Arg Tyr Tyr Ala  
 20 25 30  
 Met Lys Ile Leu Lys Lys Glu Val Ile Val Ala Lys Asp Glu Val Ala  
 35 40 45  
 His Thr Leu Thr Glu Asn Arg Val Leu Gln Asn Ser Arg His Pro Phe  
 50 55 60  
 Leu Thr  
 65

<210> 90  
 <211> 66  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 90  
 Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe  
 1 5 10 15

Gly Lys Val Ile Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala  
                   20                  25                  30  
 Ile Lys Ile Leu Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala  
                   35                  40                  45  
 His Thr Leu Thr Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe  
           50                  55                  60  
 Leu Thr  
 65

<210> 91  
 <211> 45  
 <212> PRT  
 <213> Homo sapiens

<400> 91  
 Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile Thr  
   1                  5                  10                  15  
 Asp Phe Gly Leu Cys Lys Glu Gly Ile Lys Asp Gly Ala Thr Met Lys  
                   20                  25                  30  
 Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val  
           35                  40                  45

<210> 92  
 <211> 45  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 92  
 Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala  
   1                  5                  10                  15  
 Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser  
                   20                  25                  30  
 Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val  
           35                  40                  45

<210> 93  
 <211> 57  
 <212> PRT  
 <213> Homo sapiens

<400> 93  
 Phe Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys  
   1                  5                  10                  15  
 Phe Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser  
                   20                  25                  30  
 Arg Glu Arg Val Phe Ser Glu Asp Arg Ala Arg Phe Tyr Gly Ala Glu  
           35                  40                  45  
 Ile Val Ser Ala Leu Asp Tyr Leu His  
           50                  55

<210> 94  
 <211> 57  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 94

Tyr Phe Gln Glu Leu Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys  
 1 5 10 15  
 Phe Val Met Gln Phe Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg  
 20 25 30  
 Lys Cys Gly Thr Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu  
 35 40 45  
 Ile Val Leu Ala Leu Gly Tyr Leu His  
 50 55

<210> 95

<211> 59

<212> PRT

<213> Homo sapiens

<400> 95

Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys Thr Glu Arg Pro  
 1 5 10 15  
 Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr Thr Val Ile  
 20 25 30  
 Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg Glu Glu Trp Ala  
 35 40 45  
 Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys  
 50 55

<210> 96

<211> 59

<212> PRT

<213> Caenorhabditis elegans

<400> 96

Ser Thr Phe Ala Ile Phe Tyr Phe Gln Thr Met Leu Phe Glu Lys Pro  
 1 5 10 15  
 Arg Pro Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile  
 20 25 30  
 Glu Arg Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile  
 35 40 45  
 His Ala Ile Glu Ser Ile Ser Lys Lys Tyr Lys  
 50 55

<210> 97

<211> 33

<212> PRT

<213> Homo sapiens

<400> 97

Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys Phe  
 1 5 10 15  
 Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser Arg  
 20 25 30  
 Glu

<210> 98



<211> 33  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 98  
 Leu Gln Glu Leu Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe  
 1 5 10 15  
 Val Met Glu Phe Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg  
 20 25 30  
 Glu

<210> 99  
 <211> 473  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
 Met Leu Gly Thr Val Lys Met Glu Gly His Glu Thr Ser Asp Trp Asn  
 1 5 10 15  
 Ser Tyr Tyr Ala Asp Thr Gln Glu Ala Tyr Ser Ser Val Pro Val Ser  
 20 25 30  
 Asn Met Asn Ser Gly Leu Gly Ser Met Asn Ser Met Asn Thr Tyr Met  
 35 40 45  
 Thr Met Asn Thr Met Thr Thr Ser Gly Asn Met Thr Pro Ala Ser Phe  
 50 55 60  
 Asn Met Ser Tyr Ala Asn Pro Ala Leu Gly Ala Gly Leu Ser Pro Gly  
 65 70 75 80  
 Ala Val Ala Gly Met Pro Gly Gly Ser Ala Gly Ala Met Asn Ser Met  
 85 90 95  
 Thr Ala Ala Gly Val Thr Ala Met Gly Thr Ala Leu Ser Pro Ser Gly  
 100 105 110  
 Met Gly Ala Met Gly Ala Gln Gln Ala Ala Ser Met Met Asn Gly Leu  
 115 120 125  
 Gly Pro Tyr Ala Ala Ala Met Asn Pro Cys Met Ser Pro Met Ala Tyr  
 130 135 140  
 Ala Pro Ser Asn Leu Gly Arg Ser Arg Ala Gly Gly Gly Gly Asp Ala  
 145 150 155 160  
 Lys Thr Phe Lys Arg Ser Tyr Pro His Ala Lys Pro Pro Tyr Ser Tyr  
 165 170 175  
 Ile Ser Leu Ile Thr Met Ala Ile Gln Arg Ala Pro Ser Lys Met Leu  
 180 185 190  
 Thr Leu Ser Glu Ile Tyr Gln Trp Ile Met Asp Leu Phe Pro Tyr Tyr  
 195 200 205  
 Arg Gln Asn Gln Gln Arg Trp Gln Asn Ser Ile Arg His Ser Leu Ser  
 210 215 220  
 Phe Asn Asp Cys Phe Val Lys Val Ala Arg Ser Pro Asp Lys Pro Gly  
 225 230 235 240  
 Lys Gly Ser Tyr Trp Thr Leu His Pro Asp Ser Gly Asn Met Phe Glu  
 245 250 255  
 Asn Gly Cys Tyr Leu Arg Arg Gln Lys Arg Phe Lys Cys Glu Lys Gln  
 260 265 270  
 Pro Gly Ala Gly Gly Gly Gly Gly Ser Gly Ser Gly Ser Gly Ala  
 275 280 285  
 Lys Gly Gly Pro Glu Ser Arg Lys Asp Pro Ser Gly Ala Ser Asn Pro  
 290 295 300  
 Ser Ala Asp Ser Pro Leu His Arg Gly Val His Gly Lys Thr Gly Gln

305 310 315 320  
 Leu Glu Gly Ala Pro Ala Pro Gly Pro Ala Ala Ser Pro Gln Thr Leu  
 325 330 335  
 Asp His Ser Gly Ala Thr Ala Thr Gly Gly Ala Ser Glu Leu Lys Thr  
 340 345 350  
 Pro Ala Ser Ser Thr Ala Pro Pro Ile Ser Ser Gly Pro Gly Ala Leu  
 355 360 365  
 Ala Ser Val Pro Ala Ser His Pro Ala His Gly Leu Ala Pro His Glu  
 370 375 380  
 Ser Gln Leu His Leu Lys Gly Asp Pro His Tyr Ser Phe Asn His Pro  
 385 390 395 400  
 Phe Ser Ile Asn Asn Leu Met Ser Ser Ser Glu Gln Gln His Lys Leu  
 405 410 415  
 Asp Phe Lys Ala Tyr Glu Gln Ala Leu Gln Tyr Ser Pro Tyr Gly Ser  
 420 425 430  
 Thr Leu Pro Ala Ser Leu Pro Leu Gly Ser Ala Ser Val Thr Thr Arg  
 435 440 445  
 Ser Pro Ile Glu Pro Ser Ala Leu Glu Pro Ala Tyr Tyr Gln Gly Val  
 450 455 460  
 Tyr Ser Arg Pro Val Leu Asn Thr Ser  
 465 470

<210> 100  
 <211> 347  
 <212> PRT  
 <213> Homo sapiens

<400> 100  
 Met Leu Gly Ser Val Lys Met Glu Ala His Asp Leu Ala Glu Trp Ser  
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 Tyr Tyr Pro Glu Ala Gly Glu Val Tyr Ser Pro Val Thr Pro Val Pro  
 20 25 30  
 Thr Met Ala Pro Leu Asn Ser Tyr Met Thr Leu Asn Pro Leu Ser Ser  
 35 40 45  
 Pro Tyr Pro Gly Gly Leu Pro Ala Ser Pro Leu Pro Ser Gly Pro Leu  
 50 55 60  
 Ala Pro Pro Ala Pro Ala Ala Pro Leu Gly Pro Thr Phe Pro Gly Leu  
 65 70 75 80  
 Gly Leu Ser Gly Gly Ser Ser Ser Ser Gly Tyr Gly Ala Pro Gly Pro  
 85 90 95  
 Gly Leu Val His Gly Lys Glu Met Pro Lys Gly Tyr Arg Ala Pro Ala  
 100 105 110  
 His Ala Lys Pro Pro Tyr Ser Tyr Ile Ser Leu Ile Thr Met Ala Ile  
 115 120 125  
 Gln Gln Ala Pro Gly Lys Val Leu Thr Leu Ser Glu Ile Tyr Gln Trp  
 130 135 140  
 Ile Met Asp Leu Phe Pro Tyr Tyr Arg Asp Asn Gln Gln Arg Trp Gln  
 145 150 155 160  
 Asn Ser Ile Arg His Ser Leu Ser Phe Asn Asp Cys Phe Val Lys Val  
 165 170 175  
 Ala Arg Ser Pro Asp Lys Pro Gly Lys Gly Ser Tyr Trp Ala Leu His  
 180 185 190  
 Pro Ser Ser Gly Asn Met Phe Glu Asn Gly Cys Tyr Leu Arg Arg Gln  
 195 200 205  
 Lys Arg Phe Lys Leu Glu Glu Lys Val Lys Lys Gly Gly Ser Gly Ala  
 210 215 220  
 Ser Thr Thr Arg Asn Gly Thr Gly Ser Ala Ala Ser Thr Thr Thr Pro

[illegible]

<400> 101															
Met	Met	Glu	Met	Leu	Val	Asp	Gln	Gly	Thr	Asp	Ala	Ser	Ser	Ser	Ala
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Ser	Thr	Ser	Thr	Ser	Ser	Val	Ser	Arg	Phe	Gly	Ala	Asp	Thr	Phe	Met
			20					25					30		
Asn	Thr	Pro	Asp	Asp	Val	Met	Met	Asn	Asp	Asp	Met	Glu	Pro	Ile	Pro
		35					40					45			
Arg	Asp	Arg	Cys	Asn	Thr	Trp	Pro	Met	Arg	Arg	Pro	Gln	Leu	Glu	Pro
50						55					60				
Pro	Leu	Asn	Ser	Ser	Pro	Ile	Ile	His	Glu	Gln	Ile	Pro	Glu	Glu	Asp
65					70					75					80
Ala	Asp	Leu	Tyr	Gly	Ser	Asn	Glu	Gln	Cys	Gly	Gln	Leu	Gly	Gly	Ala
				85					90					95	
Ser	Ser	Asn	Gly	Ser	Thr	Ala	Met	Leu	His	Thr	Pro	Asp	Gly	Ser	Asn
			100					105					110		
Ser	His	Gln	Thr	Ser	Phe	Pro	Ser	Glu	Cys	Tyr	Thr	Trp	Pro	Met	Gln
		115					120					125			
Gln	Tyr	Ile	Tyr	Gln	Glu	Ser	Ser	Ala	Thr	Ile	Pro	His	His	His	Leu
130						135					140				
Asn	Gln	His	Asn	Asn	Pro	Tyr	His	Pro	Met	His	Pro	His	His	Gln	Leu
145					150					155					160
Pro	His	Met	Gln	Gln	Leu	Pro	Gln	Pro	Leu	Leu	Asn	Leu	Asn	Met	Thr
				165					170					175	
Thr	Leu	Thr	Ser	Ser	Gly	Ser	Ser	Val	Ala	Ser	Ser	Ile	Gly	Gly	Gly
			180					185					190		
Ala	Gln	Cys	Ser	Pro	Cys	Ala	Ser	Gly	Ser	Ser	Thr	Ala	Ala	Thr	Asn
		195					200					205			
Ser	Ser	Gln	Gln	Gln	Gln	Thr	Val	Gly	Gln	Met	Leu	Ala	Ala	Ser	Val
	210					215					220				
Pro	Cys	Ser	Ser	Ser	Gly	Met	Thr	Leu	Gly	Met	Ser	Leu	Asn	Leu	Ser
225					230					235					240
Gln	Gly	Gly	Gly	Pro	Met	Pro	Ala	Lys	Lys	Lys	Arg	Cys	Arg	Lys	Lys
				245					250					255	
Pro	Thr	Asp	Gln	Leu	Ala	Gln	Lys	Lys	Pro	Asn	Pro	Trp	Gly	Glu	Glu
			260					265					270		
Ser	Tyr	Ser	Asp	Ile	Ile	Ala	Lys	Ala	Leu	Glu	Ser	Ala	Pro	Asp	Gly

Protein Sequence

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      275      280      285
Arg Leu Lys Leu Asn Glu Ile Tyr Gln Trp Phe Ser Asp Asn Ile Pro
 290      295      300
Tyr Phe Gly Glu Arg Ser Ser Pro Glu Glu Ala Ala Gly Trp Lys Asn
 305      310      315      320
Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met Arg Ile Gln
      325      330      335
Asn Glu Gly Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro Asp Ala
 340      345      350
Lys Pro Gly Met Asn Pro Arg Arg Thr Arg Glu Arg Ser Asn Thr Ile
 355      360      365
Glu Thr Thr Thr Lys Ala Gln Leu Glu Lys Ser Arg Arg Gly Ala Lys
 370      375      380
Lys Arg Ile Lys Glu Arg Ala Leu Met Gly Ser Leu His Ser Thr Leu
 385      390      395      400
Asn Gly Asn Ser Ile Ala Gly Ser Ile Gln Thr Ile Ser His Asp Leu
      405      410      415
Tyr Asp Asp Asp Ser Met Gln Gly Ala Phe Asp Asn Val Pro Ser Ser
 420      425      430
Phe Arg Pro Arg Thr Gln Ser Asn Leu Ser Ile Pro Gly Ser Ser Ser
 435      440      445
Arg Val Ser Pro Ala Ile Gly Ser Asp Ile Tyr Asp Asp Leu Glu Phe
 450      455      460
Pro Ser Trp Val Gly Glu Ser Val Pro Ala Ile Pro Ser Asp Ile Val
 465      470      475      480
Asp Arg Thr Asp Gln Met Arg Ile Asp Ala Thr Thr His Ile Gly Gly
      485      490      495
Val Gln Ile Lys Gln Glu Ser Lys Pro Ile Lys Thr Glu Pro Ile Ala
 500      505      510
Pro Pro Pro Ser Tyr His Glu Leu Asn Ser Val Arg Gly Ser Cys Ala
 515      520      525
Gln Asn Pro Leu Leu Arg Asn Pro Ile Val Pro Ser Thr Asn Phe Lys
 530      535      540
Pro Met Pro Leu Pro Gly Ala Tyr Gly Asn Tyr Gln Asn Gly Gly Ile
 545      550      555      560
Thr Pro Ile Asn Trp Leu Ser Thr Ser Asn Ser Ser Pro Leu Pro Gly
      565      570      575
Ile Gln Ser Cys Gly Ile Val Ala Ala Gln His Thr Val Ala Ser Ser
 580      585      590
Ser Ala Leu Pro Ile Asp Leu Glu Asn Leu Thr Leu Pro Asp Gln Pro
 595      600      605
Leu Met Asp Thr Met Asp Val Asp Ala Leu Ile Arg His Glu Leu Ser
 610      615      620
Gln Ala Gly Gly Gln His Ile His Phe Asp Leu
 625      630      635

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<210> 102  
 <211> 501  
 <212> PRT  
 <213> Homo sapiens

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<400> 102
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Asp Phe Glu Pro Gln Ser Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro
 20      25      30
Arg Pro Glu Ile Ala Asn Gln Pro Ser Glu Pro Pro Glu Val Glu Pro

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	35					40					45				
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Leu	Pro	Ser	Arg	Leu	Ser	Glu	Pro	Ala	Gly	Gly	Pro	Gln	Pro	Gly	Ile
65					70				75					80	
Leu	Gly	Ala	Val	Thr	Gly	Pro	Arg	Lys	Gly	Gly	Ser	Arg	Arg	Asn	Ala
				85					90					95	
Trp	Gly	Asn	Gln	Ser	Tyr	Ala	Glu	Phe	Ile	Ser	Gln	Ala	Ile	Glu	Ser
			100					105					110		
Ala	Pro	Glu	Lys	Arg	Leu	Thr	Leu	Ala	Gln	Ile	Tyr	Glu	Trp	Met	Val
		115					120					125			
Arg	Thr	Val	Pro	Tyr	Phe	Lys	Asp	Lys	Gly	Asp	Ser	Asn	Ser	Ser	Ala
		130				135						140			
Gly	Trp	Lys	Asn	Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Lys	Phe
145					150					155					160
Ile	Lys	Val	His	Asn	Glu	Ala	Thr	Gly	Lys	Ser	Ser	Trp	Trp	Met	Leu
				165					170					175	
Asn	Pro	Glu	Gly	Lys	Ser	Gly	Lys	Ala	Pro	Arg	Arg	Arg	Ala	Ala	
			180				185					190			
Ser	Met	Asp	Ser	Ser	Ser	Lys	Leu	Leu	Arg	Gly	Arg	Ser	Lys	Ala	Pro
		195					200					205			
Lys	Lys	Lys	Pro	Ser	Val	Leu	Pro	Ala	Pro	Pro	Glu	Gly	Ala	Thr	Pro
		210				215					220				
Thr	Ser	Pro	Val	Gly	His	Phe	Ala	Lys	Trp	Ser	Gly	Ser	Pro	Cys	Ser
225					230					235					240
Arg	Asn	Arg	Glu	Glu	Ala	Asp	Met	Trp	Thr	Thr	Phe	Arg	Pro	Arg	Ser
				245					250					255	
Ser	Ser	Asn	Ala	Ser	Ser	Val	Ser	Thr	Arg	Leu	Ser	Pro	Leu	Arg	Pro
			260					265					270		
Glu	Ser	Glu	Val	Leu	Ala	Glu	Glu	Ile	Pro	Ala	Ser	Val	Ser	Ser	Tyr
		275					280					285			
Ala	Gly	Gly	Val	Pro	Pro	Thr	Leu	Asn	Glu	Gly	Leu	Glu	Leu	Leu	Asp
		290				295					300				
Gly	Leu	Asn	Leu	Thr	Ser	Ser	His	Ser	Leu	Leu	Ser	Arg	Ser	Gly	Leu
305					310					315					320
Ser	Gly	Phe	Ser	Leu	Gln	His	Pro	Gly	Val	Thr	Gly	Pro	Leu	His	Thr
				325					330					335	
Tyr	Ser	Ser	Ser	Leu	Phe	Ser	Pro	Ala	Glu	Gly	Pro	Leu	Ser	Ala	Gly
				340				345					350		
Glu	Gly	Cys	Phe	Ser	Ser	Ser	Gln	Ala	Leu	Glu	Ala	Leu	Leu	Thr	Ser
		355					360					365			
Asp	Thr	Pro	Pro	Pro	Pro	Ala	Asp	Val	Leu	Met	Thr	Gln	Val	Asp	Pro
		370				375					380				
Ile	Leu	Ser	Gln	Ala	Pro	Thr	Leu	Leu	Leu	Leu	Gly	Gly	Leu	Pro	Ser
385					390					395					400

500

<210> 103  
 <211> 366  
 <212> PRT  
 <213> Homo sapiens

<400> 103

Arg	Gly	Ala	Ile	Arg	Ile	Glu	Lys	Asn	Ala	Asp	Leu	Cys	Tyr	Leu	Ser
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Thr	Val	Asp	Trp	Ser	Leu	Ile	Leu	Asp	Ala	Val	Ser	Asn	Asn	Tyr	Ile
			20					25					30		
Val	Gly	Asn	Lys	Pro	Pro	Lys	Glu	Cys	Gly	Asp	Leu	Cys	Pro	Gly	Thr
		35					40					45			
Met	Glu	Glu	Lys	Pro	Met	Cys	Glu	Lys	Thr	Thr	Ile	Asn	Asn	Glu	Tyr
	50					55					60				
Asn	Tyr	Arg	Cys	Trp	Thr	Thr	Asn	Arg	Cys	Gln	Lys	Met	Cys	Pro	Ser
65					70				75					80	
Thr	Cys	Gly	Lys	Arg	Ala	Cys	Thr	Glu	Asn	Asn	Glu	Cys	Cys	His	Pro
				85					90					95	
Glu	Cys	Leu	Gly	Ser	Cys	Ser	Ala	Pro	Asp	Asn	Asp	Thr	Ala	Cys	Val
			100					105					110		
Ala	Cys	Arg	His	Tyr	Tyr	Tyr	Ala	Gly	Val	Cys	Val	Pro	Ala	Cys	Pro
			115				120					125			
Pro	Asn	Thr	Tyr	Arg	Phe	Glu	Gly	Trp	Arg	Cys	Val	Asp	Arg	Asp	Phe
	130					135					140				
Cys	Ala	Asn	Ile	Leu	Ser	Ala	Glu	Ser	Ser	Asp	Ser	Glu	Gly	Phe	Val
145					150					155				160	
Ile	His	Asp	Gly	Glu	Cys	Met	Gln	Glu	Cys	Pro	Ser	Gly	Phe	Ile	Arg
				165					170					175	
Asn	Gly	Ser	Gln	Ser	Met	Tyr	Cys	Ile	Pro	Cys	Glu	Gly	Pro	Cys	Pro
			180					185					190		
Lys	Val	Cys	Glu	Glu	Glu	Lys	Lys	Thr	Lys	Thr	Ile	Asp	Ser	Val	Thr
			195				200					205			
Ser	Ala	Gln	Met	Leu	Gln	Gly	Cys	Thr	Ile	Phe	Lys	Gly	Asn	Leu	Leu
						215					220				
Ile	Asn	Ile	Arg	Arg	Gly	Asn	Asn	Ile	Ala	Ser	Glu	Leu	Glu	Asn	Phe
225					230				235					240	
Met	Gly	Leu	Ile	Glu	Val	Val	Thr	Gly	Tyr	Val	Lys	Ile	Arg	His	Ser
				245					250					255	
His	Ala	Leu	Val	Ser	Leu	Ser	Phe	Leu	Lys	Asn	Leu	Arg	Leu	Ile	Leu
			260					265					270		
Gly	Glu	Glu	Gln	Leu	Glu	Gly	Asn	Tyr	Ser	Phe	Tyr	Val	Leu	Asp	Asn
			275				280					285			
Gln	Asn	Leu	Gln	Gln	Leu	Trp	Asp	Trp	Asp	His	Arg	Asn	Leu	Thr	Ile
	290					295					300				
Lys	Ala	Gly	Lys	Met	Tyr	Phe	Ala	Phe	Asn	Pro	Lys	Leu	Cys	Val	Ser
305					310				315					320	
Glu	Ile	Tyr	Arg	Met	Glu	Glu	Val	Thr	Gly	Thr	Lys	Gly	Arg	Gln	Ser
				325					330					335	
Lys	Gly	Asp	Ile	Asn	Thr	Arg	Asn	Asn	Gly	Glu	Arg	Ala	Ser	Cys	Glu
			340					345					350		
Ser	Asp	Val	Leu	His	Phe	Thr	Ser	Thr	Thr	Thr	Ser	Lys	Asn		
		355					360					365			

<210> 104

<211> 370  
 <212> PRT  
 <213> Homo sapiens

<400> 104

Arg	Gly	Ser	Val	Arg	Ile	Glu	Lys	Asn	Asn	Glu	Leu	Cys	Tyr	Leu	Ala
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Thr	Ile	Asp	Trp	Ser	Arg	Ile	Leu	Asp	Ser	Val	Glu	Asp	Asn	Tyr	Ile
		20						25					30		
Val	Leu	Asn	Lys	Asp	Asp	Asn	Glu	Cys	Gly	Asp	Ile	Cys	Pro	Gly	
		35					40				45				
Thr	Ala	Lys	Gly	Lys	Thr	Asn	Cys	Pro	Ala	Thr	Val	Ile	Asn	Gly	Gln
	50					55				60					
Phe	Val	Glu	Arg	Cys	Trp	Thr	His	Ser	His	Cys	Gln	Lys	Val	Cys	Pro
65				70					75					80	
Thr	Ile	Cys	Lys	Ser	His	Gly	Cys	Thr	Ala	Glu	Gly	Leu	Cys	Cys	His
			85						90				95		
Ser	Glu	Cys	Leu	Gly	Asn	Cys	Ser	Gln	Pro	Asp	Asp	Pro	Thr	Lys	Cys
			100					105					110		
Val	Ala	Cys	Arg	Asn	Phe	Tyr	Leu	Asp	Gly	Arg	Cys	Val	Glu	Thr	Cys
		115					120					125			
Pro	Pro	Pro	Tyr	Tyr	His	Phe	Gln	Asp	Trp	Arg	Cys	Val	Asn	Phe	Ser
	130					135					140				
Phe	Cys	Gln	Asp	Leu	His	Lys	Cys	Lys	Asn	Ser	Arg	Arg	Gln	Gly	
145				150					155					160	
Cys	His	Gln	Tyr	Val	Ile	His	Asn	Asn	Lys	Cys	Ile	Pro	Glu	Cys	Pro
			165						170					175	
Ser	Gly	Tyr	Thr	Met	Asn	Ser	Ser	Asn	Leu	Leu	Cys	Thr	Pro	Cys	Leu
			180					185					190		
Gly	Pro	Cys	Pro	Lys	Val	Cys	His	Leu	Leu	Glu	Gly	Glu	Lys	Thr	Ile
		195					200					205			
Asp	Ser	Val	Thr	Ser	Ala	Gln	Glu	Leu	Arg	Gly	Cys	Thr	Val	Ile	Asn
		210				215					220				
Gly	Ser	Leu	Ile	Ile	Asn	Ile	Arg	Gly	Gly	Asn	Asn	Leu	Ala	Ala	Glu
225					230					235					240
Leu	Glu	Ala	Asn	Leu	Gly	Leu	Ile	Glu	Glu	Ile	Ser	Gly	Tyr	Leu	Lys
			245						250					255	
Ile	Arg	Arg	Ser	Tyr	Ala	Leu	Val	Ser	Leu	Ser	Phe	Phe	Arg	Lys	Leu
			260					265					270		
Arg	Leu	Ile	Arg	Gly	Glu	Thr	Leu	Glu	Ile	Gly	Asn	Tyr	Ser	Phe	Tyr
		275					280					285			
Ala	Leu	Asp	Asn	Gln	Asn	Leu	Arg	Gln	Leu	Trp	Asp	Trp	Ser	Lys	His
		290				295					300				
Asn	Leu	Thr	Ile	Thr	Gln	Gly	Lys	Leu	Phe	Phe	His	Tyr	Asn	Pro	Lys
305					310					315					320
Leu	Cys	Leu	Ser	Glu	Ile	His	Lys	Met	Glu	Glu	Val	Ser	Gly	Thr	Lys
			325						330					335	
Gly	Arg	Gln	Glu	Arg	Asn	Asp	Ile	Ala	Leu	Lys	Thr	Asn	Gly	Asp	Gln
		340						345					350		
Ala	Ser	Cys	Glu	Asn	Glu	Leu	Leu	Lys	Phe	Ser	Tyr	Ile	Arg	Thr	Ser
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Phe	Asp														
	370														

<210> 105  
 <211> 383  
 <212> PRT

<213> Drosophila melanogaster

<400> 105

Arg	Gly	Gly	Val	Arg	Ile	Glu	Lys	Asn	His	Lys	Leu	Cys	Tyr	Asp	Arg
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Thr	Ile	Asp	Trp	Leu	Glu	Ile	Leu	Ala	Glu	Asn	Glu	Ser	Gln	Leu	Val
		20						25					30		
Val	Leu	Thr	Glu	Asn	Gly	Lys	Glu	Lys	Glu	Cys	Ser	Leu	Ser	Lys	Cys
		35					40					45			
Pro	Gly	Glu	Ile	Arg	Ile	Glu	Glu	Gly	His	Asp	Asn	Thr	Ala	Ile	Glu
	50					55				60					
Gly	Glu	Leu	Asn	Ala	Ser	Cys	Gln	Leu	His	Asn	Asn	Arg	Arg	Leu	Cys
65					70					75				80	
Trp	Asn	Ser	Lys	Leu	Cys	Gln	Thr	Lys	Cys	Pro	Glu	Lys	Cys	Arg	Asn
			85						90					95	
Asn	Cys	Ile	Asp	Glu	His	Thr	Cys	Cys	Ser	Gln	Asp	Cys	Leu	Gly	Gly
			100					105					110		
Cys	Val	Ile	Asp	Lys	Asn	Gly	Asn	Glu	Ser	Cys	Ile	Ser	Cys	Arg	Asn
		115					120					125			
Val	Ser	Phe	Asn	Asn	Ile	Cys	Met	Asp	Ser	Cys	Pro	Lys	Gly	Tyr	Tyr
	130					135					140				
Gln	Phe	Asp	Ser	Arg	Cys	Val	Thr	Ala	Asn	Glu	Cys	Ile	Thr	Leu	Thr
145					150					155				160	
Lys	Phe	Glu	Thr	Asn	Ser	Val	Tyr	Ser	Gly	Ile	Pro	Tyr	Asn	Gly	Gln
				165					170					175	
Cys	Ile	Thr	His	Cys	Pro	Thr	Gly	Tyr	Gln	Lys	Ser	Glu	Asn	Lys	Arg
			180					185					190		
Met	Cys	Glu	Pro	Cys	Pro	Gly	Gly	Lys	Cys	Asp	Lys	Glu	Cys	Ser	Ser
		195				200						205			
Gly	Leu	Ile	Asp	Ser	Leu	Glu	Arg	Ala	Arg	Glu	Phe	His	Gly	Cys	Thr
	210					215				220					
Ile	Ile	Thr	Gly	Thr	Glu	Pro	Leu	Thr	Ile	Ser	Ile	Lys	Arg	Glu	Ser
225					230					235				240	
Gly	Ala	His	Val	Met	Asp	Glu	Leu	Lys	Tyr	Gly	Leu	Ala	Ala	Val	His
			245						250					255	
Lys	Ile	Gln	Ser	Ser	Leu	Met	Val	His	Leu	Thr	Tyr	Gly	Leu	Lys	Ser
			260				265						270		
Leu	Lys	Phe	Phe	Gln	Ser	Leu	Thr	Glu	Ile	Ser	Gly	Asp	Pro	Pro	Met
		275				280						285			
Asp	Ala	Asp	Lys	Tyr	Ala	Leu	Tyr	Val	Leu	Asp	Asn	Arg	Asp	Leu	Asp
		290				295					300				
Glu	Leu	Trp	Gly	Pro	Asn	Gln	Thr	Val	Phe	Ile	Arg	Lys	Gly	Gly	Val
305					310					315				320	
Phe	Phe	His	Phe	Asn	Pro	Lys	Leu	Cys	Val	Ser	Thr	Ile	Asn	Gln	Leu
			325						330					335	
Leu	Pro	Met	Leu	Ala	Ser	Lys	Pro	Lys	Phe	Phe	Glu	Lys	Ser	Asp	Glu
			340				345						350		
Gly	Ala	Asp	Ser	Asn	Gly	Asn	Arg	Gly	Ser	Cys	Gly	Thr	Ala	Val	Leu
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Asn	Val	Thr	Leu	Gln	Ser	Val	Gly	Ala	Asn	Ser	Ala	Ser	Leu	Asn	
	370					375					380				

<210> 106

<211> 381

<212> PRT

<213> Caenorhabditis elegans



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<211> 370

<213> Home

Ala Leu Pro Val Ala Val Leu Leu Ile Val Gly Gly Leu Val Ile Met

1												5				10				15					
Leu	Tyr	Val	Phe	His	Arg	Lys	Arg	Asn	Asn	Ser	Arg	Leu	Gly	Asn	Gly										
			20				25						30												
Val	Leu	Tyr	Ala	Ser	Val	Asn	Pro	Glu	Tyr	Phe	Ser	Ala	Ala	Asp	Val										
			35				40						45												
Tyr	Val	Pro	Asp	Glu	Trp	Glu	Val	Ala	Arg	Glu	Lys	Ile	Thr	Met	Ser										
			50				55						60												
Arg	Glu	Leu	Gly	Gln	Gly	Ser	Phe	Gly	Met	Val	Tyr	Glu	Gly	Val	Ala										
65				70						75			80												
Lys	Gly	Val	Val	Lys	Asp	Glu	Pro	Glu	Thr	Arg	Val	Ala	Ile	Lys	Thr										
			85						90			95													
Val	Asn	Glu	Ala	Ser	Met	Arg	Glu	Arg	Ile	Glu	Phe	Leu	Asn	Glu											
			100			105						110													
Ala	Ser	Val	Met	Lys	Glu	Phe	Asn	Cys	His	His	Val	Val	Arg	Leu	Leu										
			115			120						125													
Gly	Val	Val	Ser	Gln	Gly	Gln	Pro	Thr	Leu	Val	Ile	Met	Glu	Leu	Met										
			130			135						140													
Thr	Arg	Gly	Asp	Leu	Lys	Ser	Tyr	Leu	Arg	Ser	Leu	Arg	Pro	Glu	Met										
145				150						155			160												
Glu	Asn	Asn	Pro	Val	Leu	Ala	Pro	Pro	Ser	Leu	Ser	Lys	Met	Ile	Gln										
			165						170			175													
Met	Ala	Gly	Glu	Ile	Ala	Asp	Gly	Met	Ala	Tyr	Leu	Asn	Ala	Asn	Lys										
			180			185						190													
Phe	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Cys	Met	Val	Ala	Glu	Asp										
			195			200						205													
Phe	Thr	Val	Lys	Ile	Gly	Asp	Phe	Gly	Met	Thr	Arg	Asp	Ile	Tyr	Glu										
			210			215						220													
Thr	Asp	Tyr	Tyr	Arg	Lys	Gly	Gly	Lys	Gly	Leu	Leu	Pro	Val	Arg	Trp										
225				230						235			240												
Met	Ser	Pro	Glu	Ser	Leu	Lys	Asp	Gly	Val	Phe	Thr	Thr	Tyr	Ser	Asp										
			245						250			255													
Val	Trp	Ser	Phe	Gly	Val	Val	Leu	Trp	Glu	Ile	Ala	Thr	Leu	Ala	Glu										
			260			265						270													
Gln	Pro	Tyr	Gln	Gly	Leu	Ser	Asn	Glu	Gln	Val	Leu	Arg	Phe	Val	Met										
			275			280						285													
Glu	Gly	Gly	Leu	Leu	Asp	Lys	Pro	Asp	Asn	Cys	Pro	Asp	Met	Leu	Phe										
			290			295						300													
Glu	Leu	Met	Arg	Met	Cys	Trp	Gln	Tyr	Asn	Pro	Lys	Met	Arg	Pro	Ser										
305				310						315			320												
Phe	Leu	Glu	Ile	Ile	Ser	Ser	Ile	Lys	Glu	Glu	Met	Glu	Pro	Gly	Phe										
			325						330			335													
Arg	Glu	Val	Ser	Phe	Tyr	Tyr	Ser	Glu	Glu	Asn	Lys	Leu	Pro	Glu	Pro										
			340			345						350													
Glu	Glu	Leu	Asp	Leu	Glu	Pro	Glu	Asn	Met	Glu	Ser	Val	Pro	Leu	Asp										
			355			360						365													
Pro	Ser																								
		370																							

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<210> 108
<211> 374
<212> PRT
<213> Homo sapiens
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<400> 108
Ile Gly Pro Leu Ile Phe Val Phe Leu Phe Ser Val Val Ile Gly Ser
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Ile Tyr Leu Phe Leu Arg Lys Arg Gln Pro Asp Gly Pro Leu Gly Pro

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50						55						60					
Gln 65	Cys	Gly	Glu	Gly	Ser 70	Phe	Gly	Lys	Val	Tyr 75	Leu	Gly	Thr	Gly	Asn 80		
Asn	Val	Val	Ser	Leu 85	Met	Gly	Asp	Arg	Phe 90	Gly	Pro	Cys	Ala	Ile	Lys 95		
Ile	Asn	Val	Asp 100	Asp	Pro	Ala	Ser	Thr 105	Glu	Asn	Leu	Asn	Tyr 110	Leu	Met		
Glu	Ala	Asn 115	Ile	Met	Lys	Asn	Phe 120	Lys	Thr	Asn	Phe	Ile	Val 125	Gln	Leu		
Tyr	Gly	Val 130	Ile	Ser	Thr	Val 135	Gln	Pro	Ala	Met	Val 140	Val	Met	Glu	Met		
Met 145	Asp	Leu	Gly	Asn 150	Leu	Arg	Asp	Tyr	Leu	Arg 155	Ser	Lys	Arg	Glu	Asp 160		
Glu	Val	Phe	Asn 165	Glu	Thr	Asp	Cys	Asn	Phe 170	Phe	Asp	Ile	Ile	Pro	Arg		
Asp	Lys	Phe 180	His	Glu	Trp	Ala 185	Ala	Gln	Ile	Cys	Asp	Gly	Met 190	Ala	Tyr		
Leu	Glu	Ser 195	Leu	Lys	Phe	Cys 200	His	Arg	Asp	Leu	Ala 205	Ala	Arg	Asn	Cys		
Met	Ile 210	Asn	Arg	Asp	Glu	Thr 215	Val	Lys	Ile	Gly	Asp 220	Phe	Gly	Met	Ala		
Arg 225	Asp	Leu	Phe	Tyr 230	His	Asp	Tyr	Tyr	Lys	Pro 235	Ser	Gly	Lys	Arg	Met 240		
Met	Pro	Val	Arg 245	Trp	Met	Ser	Pro	Glu	Ser 250	Leu	Lys	Asp	Gly	Lys 255	Phe		
Asp	Ser	Lys 260	Ser	Asp	Val	Trp	Ser	Phe 265	Gly	Val	Val	Leu	Tyr 270	Glu	Met		
Val	Thr 275	Leu	Gly	Ala	Gln	Pro	Tyr 280	Ile	Gly	Leu	Ser	Asn	Asp 285	Glu	Val		
Leu	Asn 290	Tyr	Ile	Gly	Met	Ala 295	Arg	Lys	Val	Ile	Lys 300	Lys	Pro	Glu	Cys		
Cys 305	Glu	Asn	Tyr 310	Trp	Tyr 315	Lys	Val	Met	Lys	Met 315	Cys	Trp	Arg	Tyr	Ser 320		
Pro	Arg	Asp 325	Arg	Pro	Thr 330	Phe	Leu	Gln	Leu 335	Val	His	Leu	Leu	Ala 335	Ala		
Glu	Ala	Ser 340	Pro	Glu	Phe	Arg	Asp 345	Leu	Ser	Phe	Val	Leu	Thr 350	Asp	Asn		
Gln	Met 355	Ile	Leu	Asp	Asp	Ser 360	Glu	Ala	Leu	Asp	Leu 365	Asp	Asp	Ile	Asp		
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<211> 103
<212> PRT
<213> Caenorhabditis elegans
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